Wetria australiensis sp. nov. (Euphorbiaceae), a new generic record for Australia

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Summary

Forster, Paul I. (1994). *Wetria australiensis* sp. nov. (Euphorbiaceae), a new generic record for Australia. *Austrobaileya* 4(2): 139–143. The genus *Wetria* Baill. occurs in Asia, Malesia and Australia. *Wetria australiensis* P.I. Forst. sp. nov. is described and illustrated. It is endemic to a small area near Cairns in far north Queensland and is considered to be a vulnerable species requiring management. This is the first record of the genus *Wetria* for Australia

Keywords: *Wetria* - Australia; *Wetria australiensis*.

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Introduction

The genus *Wetria* was described by Baillon (1858), based upon the single species *W. trewioides* Baill. from Malesia. This species was later found to be conspecific with *Trewia insignis* Steud. and Airy Shaw (1972) transferred this earlier name into *Wetria*.

Wetria has been considered closely allied to *Alchornea* Sw. and was included as a section of that genus by Mueller (1866) and Bentham (1873). Airy Shaw (1980) considered that *Wetria* was close to *Alchornea* but differed in the numerous stamens and the leaves never stipellate. Webster (1975) included *Alchornea* in the subtribe *Alchorneinae* Hurus. of the tribe *Alchornieae* (Hurus.) Hutch. but did not mention *Wetria*. In his recent synopsis Webster (1994) included *Wetria* in the tribe *Acalypheae* subtribe *Cleidiinae* next to *Cleidion* Blume.

After examination of the Australian species of *Alchornea* and *Cleidion* and Malesian material of *Wetria*, it is possible to distinguish the three genera on the characters outlined in **Table 1**. Some species of *Alchornea* also appear to have leaves that are not stipellate, hence this character is of little value in distinguishing this genus from *Wetria*. In the present account it has not been possible to examine the pollen of the species concerned preventing description and analysis of pollen characters at this stage.

In late 1992, Chris Lyons of Gordonvale, north Queensland, forwarded to me the first collections of a second species of *Wetria*, that he had discovered near Gordonvale and subsequently correctly keyed to genus in one of Airy Shaw's accounts. This new species is described here and compared with *W. insignis* (**Table 2**) that occurs widely from Malesia to New Guinea (Airy Shaw 1980).

Taxonomy

Wetria Baill., Étude Gén. Euphorb. 409 (1858). **Type:** *Wetria trewioides* Baill., nom. illeg. (= *Trewia macrophylla* Blume).

***Derivation of name*:** An anagram of *Trewia*, another genus in the Euphorbiaceae.

Shrubs or trees, dioecious, with indumentum of simple, multicellular trichomes; glandular trichomes absent; stinging trichomes absent. Leaves alternate, petiolate, stipulate, entire, crenate or serrate, glandular below, penninerved, not stipellate. Inflorescences axillary, spicate, lax-flowered. Male flowers in bracteate clusters along a simple rachis. Female flowers 1 per bract along a simple rachis. Male flowers: calyx 2 or 3-partite, valvate; petals and disk 0; stamens usually 24, rarely fewer, filaments free; anthers oblong, dorsifixed, introrse, the thecae parallel or slightly diverging and partially free at the base; longitudinally dehiscent; pistillodes absent. Female flowers: sepals 5, valvate; petals and disk 0; ovary 3-locular, with

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Table 1. Comparison of *Alchornea*, *Cleidion* and *Wetria*

Character	***Alchornea***	***Cleidion***	***Wetria***
style-arms	entire	bifid	bifid
stamens	8	> 30	24
stamens in (a) vertical series (b) free	b	a	b
male flowers short-pedicellate	+	-	+
female sepals	imbricate	imbricate	valvate

Table 2. Comparision of *Wetria australiensis* and *W. insignis*

Character	***W. australiensis***	***W. insignis***
number of lateral veins in leaf lamina	16 or 17	19–27
pedicel length female flowers (mm)	2–3.5	10–14
styles	spreading; fused only at base	erect; fused for nearly half length
stamens with linear apical appendage	+	–
fruit length (mm)	5–6	9–13
fruit indumentum	clear	brown
seed diameter (mm)	4–5	6–8

1 ovule per locule; style free or slightly connate at base, linear, bifid for almost half of length, papillose along top. Fruit capsular, 3-lobed, subglobose, ± smooth, dehiscing septicidally into bivalved cocci leaving a persistent columella. Seeds ± globose, ecarunculate; testa crustaceous. Cotyledons broad, flat.

A genus of two species in mainland Asia, Malesia and Australia.

Wetria australiensis P.I. Forst. **sp. nov.** affinis *W. insigni* (Blume) Airy Shaw a qua lamina folii venis lateralibus 16 vel 17, pedicellis florum femineorum brevioribus (2–3.5 mm longis), et staminibus apice appendice lineari non integro differt. **Typus:** Queensland. Cook District: Cairns, Currunda Creek, 16°56'S, 145°41'E, 15 December 1991, *C. Lyons* 105 (holo: BRI! [2 sheets + spirit]).

Tree to 15m high; bark black and white blotched, blaze with unpleasant fruity odour. Branchlets rounded, with sparse trichomes when young, soon glabrescent. Stipules linear-lanceolate, c. 11 mm long and 2 mm wide, with sparse trichomes. Petioles flattened on top, 4–10 mm long, 1–1.4 mm diameter, with sparse trichomes. Leaf lamina elliptic, 80–300 mm long, 60–80 mm wide, discolorous, glabrous, with margin sinuate; upper surface with venation visible but not pronounced; lower surface with 16 or 17 lateral veins prominent and interconnecting reticulate venation just visible; tip acute; base cuneate. Inflorescences separated spatially and temporally, pendulous. Female inflorescences to 300 mm long, pedunculate for 80–110 mm, with axis glab-rous or with scattered trichomes, and individual flowers spaced 10–40 mm apart; bracts lanceolate, c. 1.5 mm long and 0.5 mm wide, glabrous. Female flowers: pedicels 2–3.5 mm long, c. 0.5 mm diameter, with dense hispid trichomes; sepals 5, lanceolate, 2.2–2.8 mm long, c. 1 mm wide, fused into a tube for c. 0.7 mm at base and encasing the bottom of ovaries, with sparse trichomes; ovaries c. 1 mm long and 1 mm diameter, with dense trichomes; styles c. 3 mm long, bifid for c. 1.5 mm and markedly papillose on top. Male inflorescences up to 150 mm long, pedunculate for 50–80 mm, with axis glabrous or with scattered trichomes, and flower glomerules spaced 3–18 mm apart, with usually 3 flowers per glomerule; bracts ovate, 1–1.5 mm long, c. 1 mm wide, with scattered trichomes. Male flowers: pedicels 0.8–1 mm long, c. 0.3 mm diameter, glabrous or with scattered trichomes; sepals 2 or 3, triangular-ovate, 2.5–3 mm long, 2–3 mm wide, glabrous or with an occasional trichome; stamens 24, filaments 1–1.3 mm long, c. 0.1 mm diameter, glabrous; anthers 0.8–1 mm long, 0.8–1 mm wide, terminated by a linear appendage 0.5–0.7 mm long. Fruit 5–6 mm long, 9–10 mm diameter, with short dense trichomes, pedicels 6–7 mm long. Seeds 4–5 mm diameter, smooth, pale brown. Seedling: cotyledons ± orbicular, c. 13 mm long and 16 mm wide, below glabrous and with 5 veins from base, above with scattered trichomes; first 3 leaves alternate, obovate to ovate, faintly sinuate on margins and with sparse trichomes. **Fig. 1.**

***Specimens examined*: Queensland.** Cook District: Lamb Range, E of Chujeba Peak, 16°56'S, 145°41'E, Jan 1992, *Lyons* 108 (BRI); Currunda Creek, 9 km W of Cairns, 16°56'S, 145°41'E, Jan 1993, *Forster* 13088 & *Bean* (BRI, MEL, QRS).

Distribution and habitat: *Wetria australiensis* is known only from the upper parts of the Currunda Creek catchment in the foothills west of Cairns. Plants grow in complex notophyll vineforest dominated by an *Argyrodendron* species on reddish soil derived from metamorphic rocks along and above watercourses.

Phenology: Flowering from December to January, fruiting from January to February.

Etymology: The specific epithet refers to the distribution of this species that is restricted to Australia.

Conservation status: *Wetria australiensis* is a common plant in the area of the type locality; however, although most of the population occurs in Currunda Logging Area in State Forest 607, at present the area has no conservation status. Lower parts of the habitat are under direct and immediate threat from residental development. As both this plant and the newly described and restricted *Acalypha lyonsii* P.I. Forst. (Forster 1994) occur in the same general area, moves should be made to

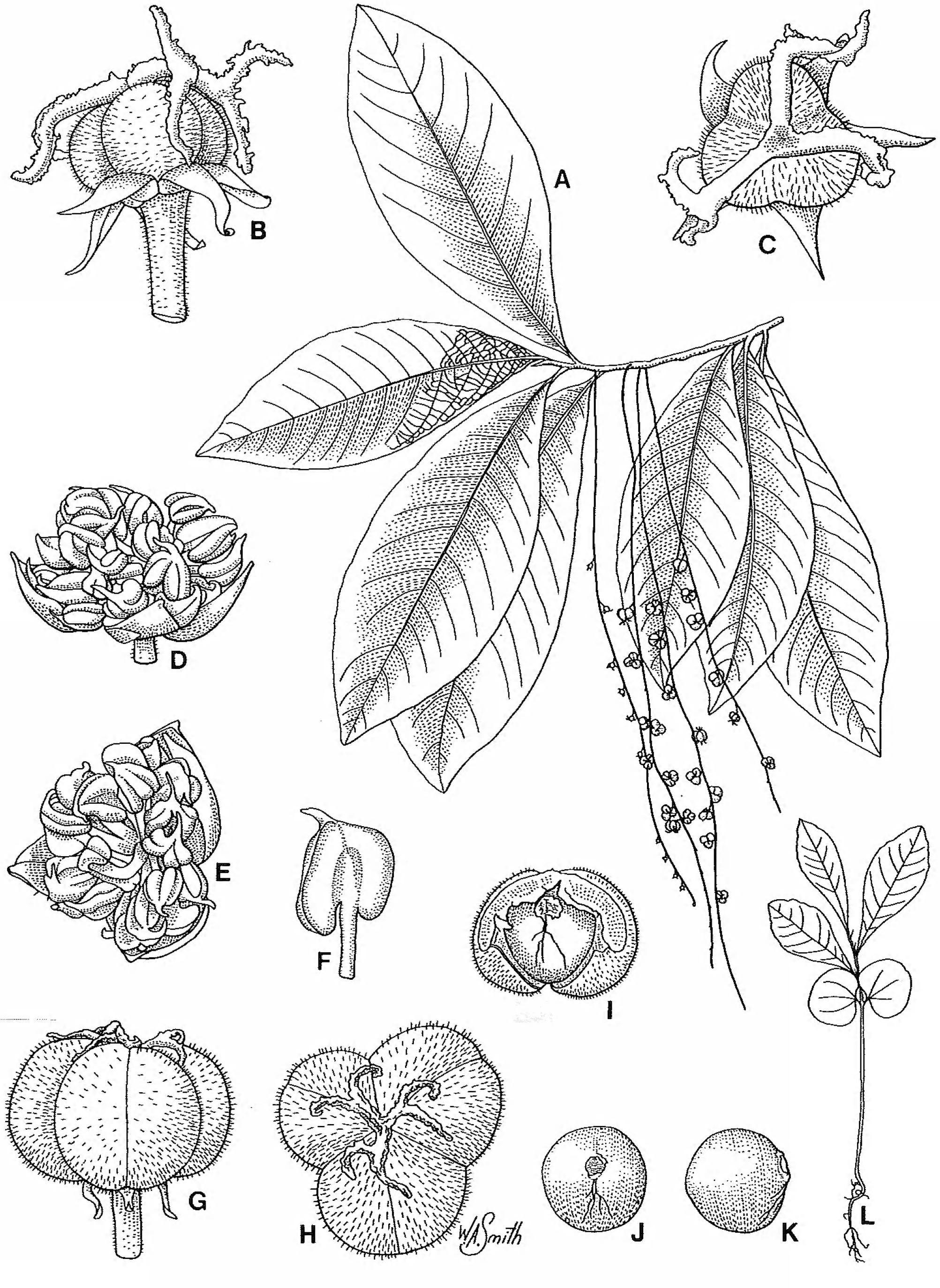

Fig. 1. *Wetria australiensis*. A. habit of flowering and fruiting branchlet × 0.6. B. side view of female flower × 12. C. face view of female flower × 12. D. side view of male flower ×12. E. face view of male flower × 12. F. stamen × 24. G. side view of fruit × 6. H. face view of fruit × 6. I. capsule with seed × 6. J. ventral view of seed × 6. K. lateral view of seed × 6. L. seedling × 1. A,G–H, L, Lyons 108; B–F, Lyons 105; I–K, Forster 13088 & Bean. Del. W. Smith.

convert part of the State Forest into a more secure form of land tenure. An appropriate conservation coding for *W. australiensis* is 2V (cf. Briggs & Leigh 1988).

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